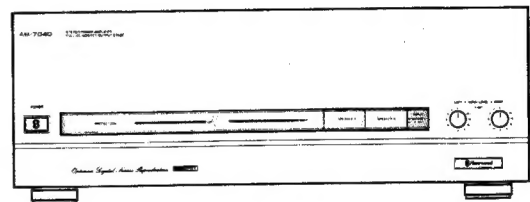


OPERATING INSTRUCTIONS
MANUEL D'INSTALLATION ET D'UTILISATION
BEDIENUNG SANLEITUNG
INSTRUCCIONES DE FUNCIONAMIENTO



AM7040

Stereo Power Amplifier
Amplificateur de Puissance
Stereo Kraft Verstärker
Amplificador de Potencia

 **Sherwood.**



Live Performance SoundTM



Unpacking and Installation

Congratulations on Your Purchase!

Your new high fidelity Power-Amplifier is designed to deliver maximum enjoyment and years of trouble free service. Please take a few moments to read this manual thoroughly. It will explain the features and operation of your Power-Amplifier and help insure a trouble free installation.

Please unpack your Power-Amplifier carefully. We recommend that you save the carton and packing material. They will be helpful should you ever need to move your unit and may be required if you ever need to return it for service.

Your Power-Amplifier is designed to be placed in a horizontal position and it is important to allow at least two inches of space both over and behind your unit for adequate ventilation and cabling convenience.

To avoid early damage, never place the unit near radiators, in front of heating vents, in direct sun light, or in excessively humid or dusty location.

Connect your complementary components as illustrated in the following section.

NOTE: IF YOU WISH TO STACK YOUR EQUIPMENT VERTICALLY, RECOMMEND YOU TO TRY TO PLACE YOUR POWER AMPLIFIER ON THE TOP OF YOUR AUDIO SYSTEM AND ALLOW AT LEAST TWO INCHES OF SPACE ABOVE UNIT FOR ADEQUATE VENTILATION.



WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Attention: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

Caution: Do not block ventilation openings or stack other equipment on top.

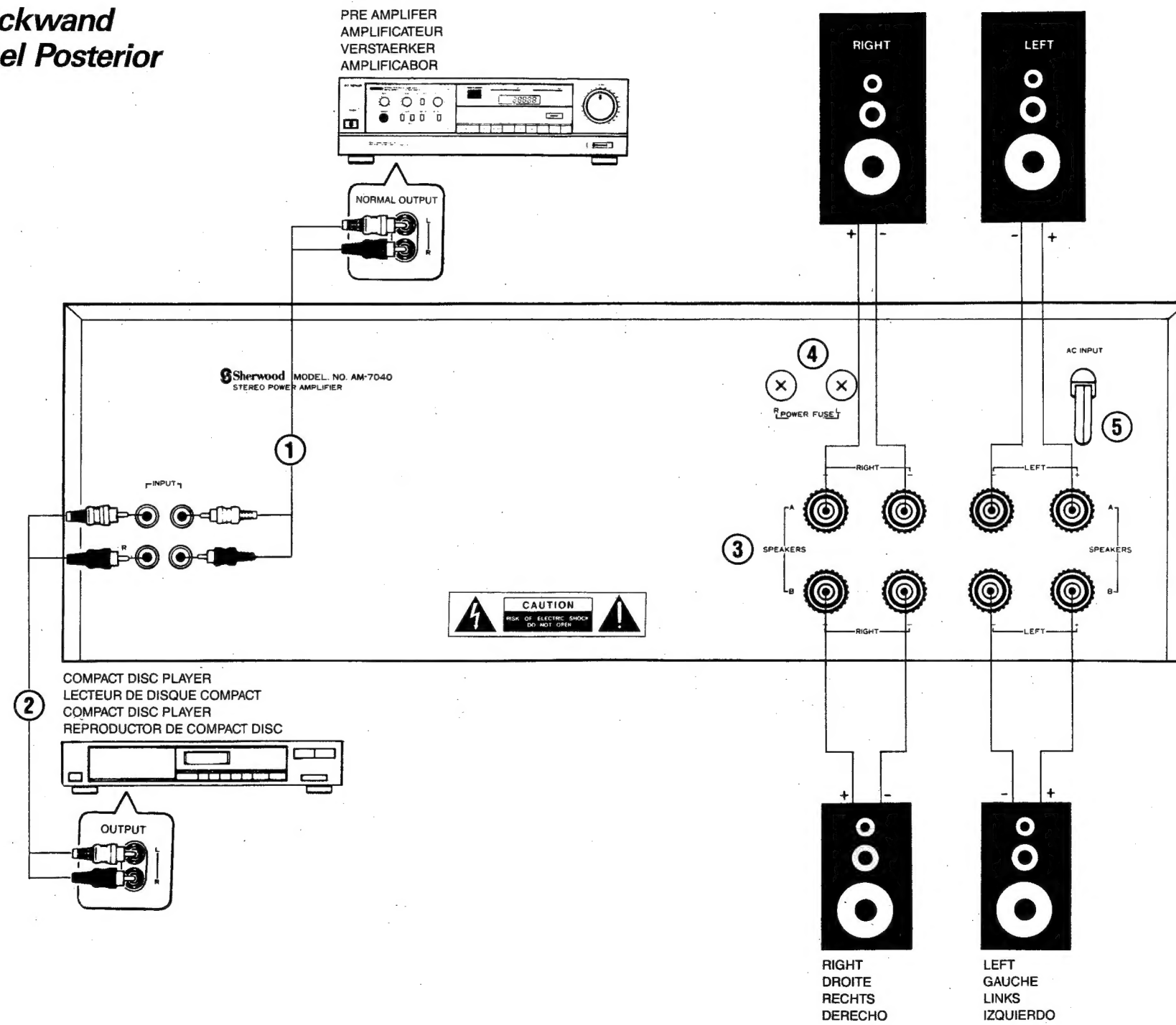
Attention: Ne pas bloquer les conduits d'aération ou entasser d'autre équipement dessus.

Rear Panel Connections

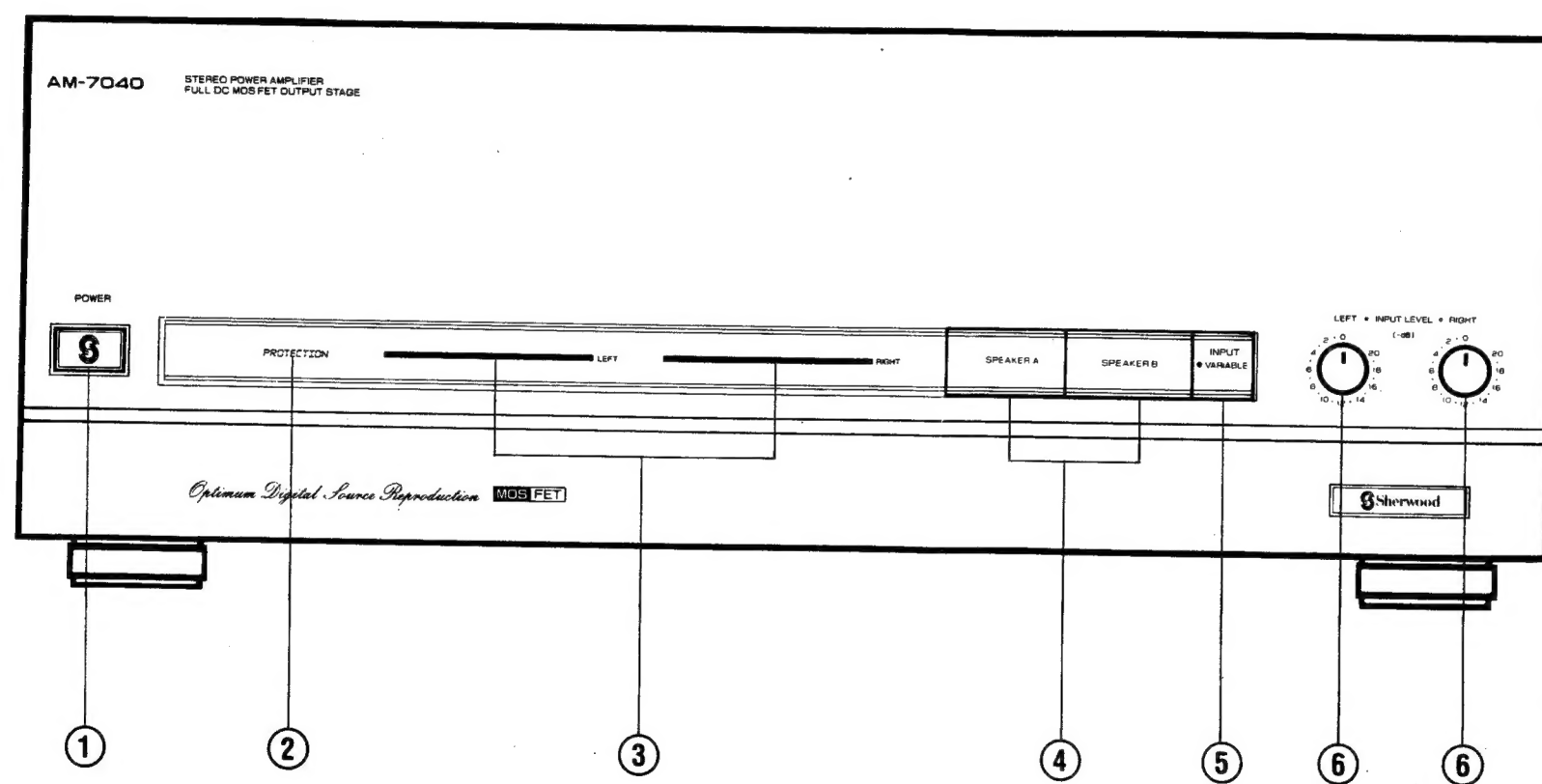
Prises de l'Arrière

Anschlüsse In Der Rückwand

Conexiones En El Panel Posterior



Front Panel Controls
Commandes de l'Avant
Steuerungen in der Vorderwand
Mandos de Control del Panel Frontal



Rear Panel Connections

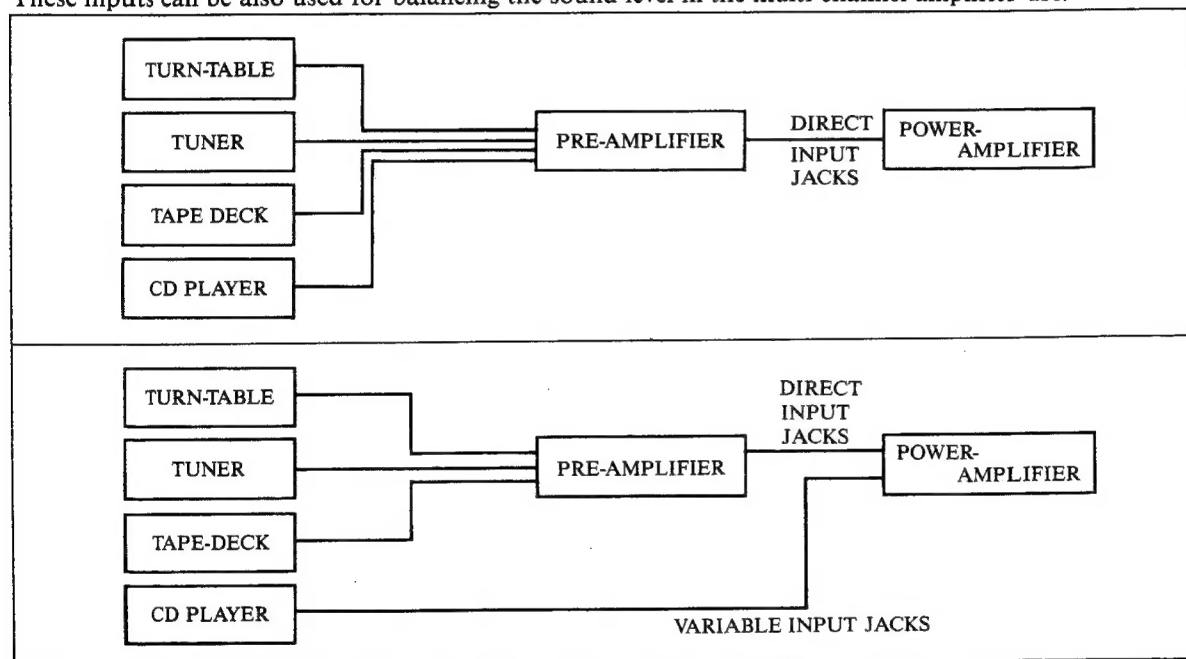
1. DIRECT INPUT JACKS

Inputs for connection of your matching Pre-Amplifier. You will have two leads from the Pre-Amplifier output to connect to this Power-Amplifier input. One lead will carry LEFT channel information and should be connected to the LEFT Pre-Amplifier output. The other lead should be connected to the RIGHT Pre-Amplifier output. In general, the red colored plug is used to connect the right channel signal and the white colored plug for the left channel.

2. VARIABLE INPUT JACKS

These input jacks can be connected directly to high level sources like CD players without to Pre-Amplifier. CD player signals pass through the shortest path to the Power-Amplifier, producing minimized phase shift and improving sound quality.

These inputs can be also used for balancing the sound level in the multi channel amplifier use.



3. SPEAKER OUTPUT A AND B TERMINALS

This Power-Amplifier enables you to listen to two pairs of speakers individually or in various combinations as marked on the SPEAKERS switch on the front panel. Connect your main LEFT and RIGHT speakers to the corresponding A speaker terminals and use B speaker terminals for the remote pair located elsewhere in your home. For all speaker connections, make sure that the phasing is correct. (+) terminals on the Power Amplifier must be connected to the positive (+) terminal on the speaker and likewise (–) terminals to the negative (–) terminal. Speakers between 4 and 16 ohms impedance can be used if only one pair of speakers is used, but if two pairs of speakers are connected, make sure that each speaker has a minimum impedance of 8 ohms for safe Amplifier operation. To avoid power loss in the speaker cables, follow the recommendations of wire gauge for given lengths of cable:

- short runs #16 gauge wire
- beyond 30 ft. #14 gauge wire
- beyond 90 ft. #12 gauge wire

- * Turn the power off all the time when making speaker or input connections.
Avoid short circuits when connecting speakers to the amplifier.

4. MAIN POWER FUSE

Since this Power-Amplifier is made with two separate power supplies for the right and left channel, two separate power fuses are provided for your own safety and to protect your equipment. Do not replace them by the fuses with a larger rating.

5. AC INPUT CORD

Plug cord into AC outlet. Make sure to check the wattage capacity of the wall outlet as the Power-Amplifier can draw up to maximum 1300 watts.

Front Panel Controls

1. POWER SWITCH

Press this switch to turn the power on. Press again to turn the power off. If no sound comes from either channel after the Power-Amplifier is switched ON, check whether the AC power cord is accidentally disconnected, POWER fuse on the rear panel is blown, or SPEAKERS and INPUT switches are incorrectly positioned.

Note: Reduce Pre-Amplifier volume when turning power OFF.

It is advisable to make it a habit to always reduce the volume of the Pre-Amplifier before turning off the Power-Amplifier. If the power of the Power-Amplifier is turned OFF while the signal from the Pre-Amplifier is being fed into the Power-Amplifier, the contact point of the protection relay in the Power-Amplifier may be damaged and result in a poor contact.

2. PROTECTION INDICATOR IN PROTECTION CIRCUIT

AM7040 incorporates protection circuit for itself and connected speakers. Refer to followings for how this circuit with the indicator works.

- A. **Power ON/OFF:** When you turn on the Power-Amplifier, the speaker will remain silent with this indicator lighting up for about 5 seconds. This is caused by the protection circuit which keeps the output of Power-Amplifier off until all components have attained a state of completely stable operation. Otherwise, unpleasant noise and, in extreme cases, damage to speakers might occur in the first few seconds. When you turn off the Power-Amplifier, this indicator will remain lighting up for up for about 0.5 seconds. This is normal and does not indicate a problem.
- B. **Over heating:** If the Power-Amplifier is severely over-heated, it might have been caused by some combination of continued very high power output, extremely low speakers impedance load, high ambient temperature or a defect in the speakers, then the thermal circuit bimetal automatically shuts down with the indicator lighting up when the temperature of the heat sink and transformer reaches 135 degrees C (275°F). When the temperature drops, normal operation resumes automatically.
- C. **Shorted speaker terminal:** If you hear a repeated clicking of the speaker relay with the indicator flickering, turn off the power switch and carefully check for defects in the speaker or in the wiring between Power-Amplifier and speakers. Never use speakers with the speaker terminals shorted since this may damage the output devices in the Power-Amplifier.
- D. **DC voltage shift at speaker terminal:** If the output of Power-Amplifier is shifted to DC voltage at speaker terminals, it might have been caused by the melted internal fuses or damaged internal parts, then the protection circuit may operate and make speaker relay off with this indicator lighting up. This prevents connected speaker from being damaged by shifted DC voltage.

3. OPERATION INDICATOR

This indicator automatically changes color by sensing the output power level according to the volume control on the front panel of the Pre-Amplifier. The indications are as follows.

- A. No indication; Output power of less than 1W.
- B. Amber; Normal middle and high listening level.
- C. Red; Means that Power-Amplifier is overloaded.

If the indicator in red lights up frequently, decrease the volume control of the Pre-Amplifier.

4. SPEAKERS SELECTOR SWITCH

This switch allows you to select various combinations of speakers as follows

- 1) To active "Main" speakers only connected to "A" speakers terminal on the rear panel, push "A" switch only.
- 2) To activate "Remote" speakers only connected to "B" speakers terminal on the rear panel, push "B" switch only.
- 3) To activate both "A" and "B" speakers, push "A" and "B" switches.
- 4) To switch all the speakers off momentarily, push both "A" and "B" switches again.

5. INPUT SELECTOR (DIRECT/VARIABLE) SWITCH

Selects either DIRECT or VARIABLE input mode. The indicator will light (amber) in VARIABLE mode.

6. VARIABLE INPUT LEVEL VOLUME

Controls the volume of the signal from the VARIABLE input jacks on the rear panel with INPUT SELECTOR switch ⑤ set to VARIABLE mode. Turning counter clockwise decrease the sound level and tuning clockwise increase it.

In Case of Difficulty

If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Sympton	Cause	Remedy
Power on but no sound.	1. Power cord not plugged in. 2. Poor connection at wall outlet. Power outlet inactive. 3. VOLUME control set fully counter-clockwise	1. Check plug contact. 2. Check outlet using a lamp or other appliance (outlet may be controlled by a wall switch). 3. Set the control to your preference.
No sound from left and right.	1. Speaker cords disconnected. 2. Speakers switched off. 3. No input selector switch is in use.	1. Check speaker connections. 2. Check speaker switch 3. Push one of the selector switches to select the desired program.
Sound from left or right, but not both.	1. Poor speaker connections. 2. Defective speaker. 3. BALANCE set to one extreme or the other.	1. Check connections at both ends of speaker cord. 2. Reverse speakers, if problem stays with speaker have speaker checked. 3. Check setting of BALANCE control.
Protection indicator does light remain	1. Poor speaker connection. 2. Over heated. 3. Output DC shift.	1. Check connection at amplifier and speakers. Check speaker wires. 2. Check speakers and wires or reduce volume or ventilation condition. 3. Check the DC voltage at speaker terminals
Excessive hum at normal volume settings.	1. Induced hum from other components. 2. Ground loops in system. 3. Bad input cables. 4. Faulty source material or faulty input signal.	1. Pre-Amplifier and turn-table away from Power-Amplifier. 2. Reverse AC plug an each component. 3. Replace input cables. 4. Try different material or change input signal.
Distortion when using Power-Amplifier at loud levels.	1. Overdriving of Power-Amplifier or speaker systems. 2. Impedance of speakers is dropping below 2 ohms.	1. Reduce Volume on the Pre-Amplifier so operating indicator RED lights do not come on. 2. Check speakers. If more than one pair speaker system is used try connecting them in series rather than parallel, to raise overall impedance.

Specification of EIA/IHF Version

POWER OUTPUT PER CHANNEL, MIN RMS FROM 20 Hz TO 20 KHz WITH NO MORE THAN 0.04% THD, INTO 8 OHMS (FTC POWER)	200W
TAN 0.08% THD, INTO 4 OHMS	320W
DYNAMIC POWER OUTPUT PER CHANNEL, INTO 8 OHMS (FTC POWER + DYNAMIC HEADROOM)	250W
INTO 4 OHMS	450W
INTO 2 OHMS	650W
INTERMODULATION DISTORTION AT 8 OHMS AT 200W	0.02%
DAMPING FACTOR AT 8 OHMS, 50 Hz	150
FREQUENCY RESPONSE, -3 dB	5 Hz-150 KHz

SIGNAL TO NOISE RATIO("A" WTD/UNWEIGHTED) 200W, 1K OHM TERMINATED	120/90 dB
SIGNAL TO NOISE RATIO("A" WTD/UNWEIGHTED) 1W, 1K OHM TERMINATED	95/80 dB
INPUT SENSITIVITY 8 OHMS, 200W AT 1 KHz	1000mV
CHANNEL SEPARATION AT 1 KHz, 1K OHM TERMINATED	80 dB
10 KHz, 1K OHM TERMINATED	70 dB
SLEW FACTOR	5
SLEW RATE	40V/ μ S
RISING TIME	2.0 μ sec
POWER CONSUMPTION	450W (MIN 60W,
UNIT DIMENSION (W×H×D)	440×150×400 mm
UNIT WEIGHT	25.5Kg

Specification of DIN/IEC Version

IEC STANDARD OUTPUT POWER PER CHANNEL	
63 Hz TO 12.5 KHz INTO 8 OHMS	220W
INTO 4 OHMS	340W
DIN STANDARD OUTPUT POWER PER CHANNEL	
1 KHz INTO 8 OHMS	230W
INTO 4 OHMS	350W
DYNAMIC POWER OUTPUT PER CHANNEL	
INTO 8 OHMS	270W
INTO 4 OHMS	450W
INTO 2 OHMS	650W
THD, -6 dB RATED OUTPUT POWER, INTO 8 OHMS 1 KHz	0.007%
10 KHz	0.009%
IMD, -6 dB RATED OUTPUT POWER, INTO 8 OHMS	0.007%
INTO 4 OHMS	0.008%
DAMPING FACTOR AT 200W/8 OHMS, 50 Hz	150
FREQUENCY RESPONSE (-3 dB)	5 Hz-150 KHz
SIGNAL TO NOISE RATIO (A WTD/UNWTD)	
• 22K OHMS TERMINATED, REFERENCE 0 dB: 200W/8 OHMS	110/90 dB
• 22K OHMS TERMINATED, REFERENCE 0 dB: 1W/8 OHMS	90/80 dB
INPUT SENSITIVITY, 8 OHMS, 200W 1 KHz	1000mV
CHANNEL SEPARATION, 200W/8 OHMS, 22K OHM TERMINATED	
1 KHz	80 dB
10 KHz	70 dB
SLEW RATE	40V/ μ s
RISING TIME	2.0 μ sec
POWER CONSUMPTION	1300W MAX.
UNIT DIMENSION (W×H×D)	440×150×400 mm
UNIT WEIGHT	25.5Kg

NOTE: Specifications and design subject to change without notice for improvements.